Pathology, M.S.

The M.S. program in pathology prepares postbaccalaureate science majors for a range of biomedical careers. Graduate-level coursework provides students with a foundation in cellular and molecular biology, as well as specialized knowledge in pathobiology. A laboratory intensive thesis project equips trainees with cutting edge research skills. Students typically complete the program in two and one-half years.

Requirements

The Master of Science program in pathology requires a minimum of 30 s.h. of graduate credit, including 21 s.h. of coursework and 9 s.h. of research leading up to the thesis. Students must maintain a program g.p.a. of at least 2.75. The M.S. with a major in pathology requires the following coursework.

Required Coursework

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of these</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATH:5270/</td>
<td>Pathogenesis of Major Human Diseases</td>
<td>3</td>
</tr>
<tr>
<td>MMED:5270</td>
<td></td>
<td></td>
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<tr>
<td>PATH:6220</td>
<td>Seminar in Pathology (taken two semesters for 1 s.h. each)</td>
<td>2</td>
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<tr>
<td>BIOS:4120</td>
<td>Introduction to Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>BMED:5207</td>
<td>Principles of Molecular and Cellular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BMED:7270</td>
<td>Scholarly Integrity/ Responsible Conduct of Research I</td>
<td>0</td>
</tr>
<tr>
<td>BMED:7271</td>
<td>Scholarly Integrity/ Responsible Conduct of Research II</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Hours 11

Required coursework results in:

- a basic understanding of molecular and cellular biology,
- a basic understanding of biostatistics, and
- an advanced understanding of pathobiology and mechanisms of human disease.

Electives

Remaining graduate-level coursework consists of electives focused on the area or topic related to a student’s thesis project. The elective courses are offered by a range of departments on the biomedical campus.

Thesis

The thesis project is carried out under the guidance of the mentor and thesis committee. The committee is composed of a student’s mentor and two additional faculty members. In general, the thesis consists of four chapters with the first being a concise review of the literature; the second, materials and methods; and the last two, a scholarly description of the project results. The thesis must be defended before the committee prior to final approval.

For more information, view the Master of Science in Pathology on the Department of Pathology website.

Admission

Applicants must have a bachelor’s degree in a science discipline and a g.p.a. of at least 3.00. In addition, previous research experience is highly desired. Applicants who are available for an on-site interview are preferred.

Applicants whose first language is not English must submit official test scores to verify English proficiency. Applicants can verify English proficiency by submitting official test scores from the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), or Duolingo (DET). Test scores must meet Graduate College requirements.

Graduate Record Examination (GRE) General Test scores are no longer required to apply.

Students who are applying must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations on the Graduate College website.

Financial Support

All pathology graduate students receive full stipend and tuition support until they complete the program. Stipend amounts are at the same level as other graduate programs on the biomedical campus. The program also pays most of the costs for health and dental insurance.

Career Advancement

The M.S. program in pathology is designed for graduates to advance into research assistant or research scientist positions in academic and private sector laboratories, or to be competitive for advanced degree programs such as the Ph.D., M.B.A., or M.D.